

Road	train	construction site	hydro	other sector	from	to	Project	client	cross-section [m2]	length [km]	total project cost Mio.
							Activites Performed in brief	client			
	x				2017	-	<b>RMTC. Metro Riyadh. Design Engineer Tunnel Ventilation and Life Safety. Management of the construction consortium BACS for lines 1 and 2. Assessment of detailed design for compatibiliy with project requirements.</b>	Riyadh Development Authority (ADA)	60	54.0	16000
		x			2017	2017	NAGRA. Disposal sites. 2nd opinion, optimisation and assessment of ventilation planning.	Swiss Cooperative for the Final Deposit of Nuclear Waste (NAGRA)	50	18.0	3000
x					2017		State Building Office Passau. B11, Operational retrofit Riedberg tunnel and enclosure Deggendorf. Ventilation escape tunnels and stairs.	State Office for Civil Works Passau	56	1.5	50
					2016		Appraisal of the expert opinion of 17.11.2015 Reference number St 5 OH 14/14 Intoxication ./ GROWI	county court Heilbronn		n/a	1
x					2016		<b>ASTRA. Gotthard Strassentunnel. General project, design planning ventilation. Realization of considerable savings in the order of several 10 Mio. CHF</b>	ASTRA	65	16.9	10000
x					2015		Construction company Passau. Commissioning Tests Tunnel Deggendorf.	State Office for Civil Works Passau	80	1.5	50
x					2015	2016	IBE Slovenia. Golauc, Dekani, Lucan and Valetta road tunnels. Detailed project ventilation.	Amberg / Highway Authority Slovenia	60	4.0	100
	x				2015	2016	Munich subway system. CFD investigation smoke spread 5 metro stations.	MVV		15.0	100
	x	x			2015		<b>Stuttgart 21 - Steinbühl tunnel. Ventilation for construction</b>	DB / German Railways	x	10.0	8000
	x				2015		Israeli Railways. A1 Tel Aviv - Jerusalem. Ventilation 5 Tunnel T1, T2, T3, T3A and T4. Preliminary	IR / Israeli Railways		10.0	1000
x					2014		Arteris SA / Amberg Engineering AG. Autopista Regis-Bittencourt. Tunnels T-3 and T-4. Ventilation report. Preliminary design	Arteris SA / Amberg Engineering AG	60	3.0	200
x					2014		Mirabit Consultoria / Amberg Engineering AG. Transolimpica Rio de Janeiro. Tunnel Engenho Velho. Ventilation report. Preliminary design.	Mirabit Consultoria / Amberg Engineering AG	60	4.0	100
x					2014		Viaplan / Amberg Engineering AG. Struma Motorway. Tunnel Zhelezniza and Kresna. Security strategy. Preliminary design.	Viaplan / Amberg Engineering AG	60	3.0	100
x					2014		City of Rotterdam / Amberg Engineering AG. Maas Tunnel. Calculation of the critical velocity and design of a Saccard nozzle on the basis of FDS calculations.	City of Rotterdam / Amberg Engineering AG		1.0	50
x					2014		Tunnel Rohrschach / Amberg Engineering AG. Study on self-preservation in the event of an event. Calculations and analyzes based on FDS.	Highway Authority St. Gallen / Amberg Engineering AG		0.5	20
x					2014		Tunnel Soroška / Amberg Engineering AG. Ventilation concept and scenario analysis.	Highway Authority Slovakia / Amberg Engineering AG		4.6	250
			x		2014		Geotunnel / Amberg Engineering AG. Belesar-Los Peares pumped-storage power station. Baulüftung.	Geotunnel / Amberg Engineering AG		10.0	1000
			x		2014		Power station Bärenwerk / Amberg Engineering AG. Assessment of building ventilation.	Power station Bärenwerk / Amberg Engineering AG		5.0	1000
	x				2013		ASTRA Thun. Tunnel Pieterlen. Technical expert opinion on compliance with the directives. Expert activity.	Swiss Highway Authority (ASTRA)		1.5	50

	x			2013		Amberg Engineering. Tunnel Follobanen (Oslo-Ski). Assessment of the pressure comfort criteria and selection of the required tunnel cross section for a 20 km long railway tunnel. Instational compressible calculations with NUMSTA.	Norway Railways / Amberg Engineering AG		20.0	10000
	x			2013	2017	<b>BAV. Expert for the assessment of ventilation projects of new railway tunnels and underground stations. Lot CEVA Geneva.</b>	Swiss Federal Office of Transport (BAV / OFT)		20.0	2000
x				2012		ASTRA Thun. Tunnel Soliwald. Technical expert opinion. Impact Fact Sheet for Risk Analysis on GEK. Expert activity.	Swiss Highway Authority (ASTRA)		0.8	50
x				2012		<b>Slovak National Highway Company (NDS). Advisory member for ventilation in the selection committee for the applications for the building contract for the tunnel Višňové.</b>	Slovak National Highway Company (NDS)		7.0	350
x				2012		ASTRA Thun / Rüegg AG. Tunnel Soliwald. Execution project Escape lanes. TPL ventilation.	Swiss Highway Authority (ASTRA)		0.8	50
x				2012		<b>Caltrans / Metro / CH2M Hill / ILF USA. Interstate 710. Concept study. Strassentunnel with about 6 km, 4 lanes per direction. TPL ventilation.</b>	Caltrans / CH2M Hill		6.0	1500
x				2012	2022	ASTRA / ILF CH. Preliminary project, detail project, execution project. NO17 50/42 Expansion of the northern perimeter of Zurich. Design and construction management Tunneling mechanics, electrical and sensor technology. 3 Tubes and refurbishment pipes Gubrist tunnel, north bypass Zurich. Dept. P.	Swiss Highway Authority (ASTRA)		5.0	300
x				2012		Slovak National Highway Company (NDS). Concept study for ventilation variants for the Višňové tunnel as a supplement to the tender.	Slovak National Highway Company (NDS)		7.0	350
x		x		2012		ASTRA / ILF CH. Execution project and action concept. 2. Tube Tunnel Faesenstaub (1.45 km) as well as escape route of the 1st tube. TPL ventilation	Swiss Highway Authority (ASTRA)	x	1.5	100
	x			2012		<b>SBB / ILF CH. ZEB, Olten-Aarau, Integrale 4-Track (Eppenberg Tunnel). Escape routes ventilation. Project manager ventilation.</b>	Swiss Railways (SBB)		3.1	150
			x	2011		Implenia Bau AG. KWO Plus. Water power station Innertkirchen. BA-Baumeisterarbeiten. Elaboration of offers for stollen guidance.	Implenia AG		5.0	1000
	x			2011	2012	TransRUN / Amberg Engineering. Regional traffic. 15 km. Preliminary study. TPL ventilation.	TransRUN		15.0	1500
	x	x		2011		<b>California High Speed Rail Authority / ILF USA. California High Speed Train Project. Project review. PL Ventilation.</b>	California High Speed Rail Authority (CHSRA)		20.0	10000
		x		2011		Implenia Bau AG. KWO Plus. Water power station Innertkirchen. Construction work. Elaboration of ventilation concepts to offer variants of the tunnel guidance.	Implenia AG		10.0	3000
		x		2011		Implenia construction. Nant de Drance, construction ventilation, adaptation to increased turbine performance.			20.0	2000
x				2010	2011	ASTRA / IG STB. Belchentunnel 3. Tube. 3 km. Building ventilation and cooling.	Swiss Highway Authority (ASTRA)		3.1	150
x				2010		ASTRA / ILF CH. Measures concept. Renewal Ventilation and Sensors Tunnel Faesenstaub (1.45 km) / Cholfirst (1.2 km), road traffic. TPL ventilation	Swiss Highway Authority (ASTRA)		2.7	150
x				2010		ASTRA / ILF CH. Variant study, measures. Escape route concept Tunnel Faesenstaub (1,45 km) / Cholfirst (1,2 km), traffic. TPL ventilation	Swiss Highway Authority (ASTRA)		2.7	150
x				2010	2011	ASTRA / ILF CH. Tunnel Schoren. Street, 1,3 km. Variant Study Smoke Extraction. TPL ventilation	Swiss Highway Authority (ASTRA)		1.3	80
x				2010	2011	Slovakian Tunneling Association (STA). Creation of the National Ventilation Directive for Strassentunnel as the sole author.	Slovak Tunneling Association (STA)		n/a	0.1
x				2010		<b>ASTRA / ILF CH. Gotthard Strassentunnel. Study of alternatives. TPL ventilation.</b>	Swiss Highway Authority (ASTRA)		16.0	10000
		x		2010	2011	NAGRA / ILF CH. Disposal sites. Study. TPL ventilation.	Swiss Cooperative for the Final Deposit of Nuclear Waste (NAGRA)		20.0	3000
x				2009	2010	Dopravoprojekt / Terraprojekt. TEN-T railway tunnel Bratislava. 4 km. Control planning ventilation.	Dopravoprojekt		4.0	200

x				2009		BAST / ILF Linz. Study to establish a uniform approach to the safety assessment of road tunnels. Determination visibility in fire. TPL ventilation.	German Authority for Road Tunnels (BAST)	n/a	0.1
x				2009		ASTRA / ILF CH. Galgenbuckunnel, 1.1 km, road traffic. TPL ventilation.	Swiss Highway Authority (ASTRA)	1.1	50
x				2008	2016	<b>ASTRA / ILF CH. Seelisbergtunnel, 9.3 km. Builder support ventilation.</b>	Swiss Highway Authority (ASTRA)	9.3	1200
	x			2008		City of Edmonton / Aecom / ILF USA. Metro extension north. Detail project, execution project. TPL ventilation.	City of Edmonton	0.6	100
	x			2008	2009	City of Edmonton / Aecom / ILF USA. Expert assessment of existing ventilation system.	City of Edmonton	11.0	100
	x			2008		Washington Metro / ILF USA. Metro Dulles Airport. Builder support ventilation.	City of Washington	1.0	100
	x	x		2008	2009	<b>Caltrans / ILF USA. Interstate 710. Feasibility study. Strassentunnel with about 6 km, 4 lanes per direction. PL ventilation.</b>	Caltrans / CH2M Hill	6.0	1500
x				2007		OSE / ILF. Railway station Kalambaka-Ioannina, 10 km. Preliminary project.	Greek railway company (OSE)	10.0	500
x				2007		Mosty Katowice / ILF. South Circumcision Warsaw. Road Tunnel ventilation.	City of Warsaw	3.0	150
x				2007		ABD Southern Bavaria / ILF. Kramertunnel, CFD study fan cavern.	Highway Authority Southern Bavaria	3.6	50
	x			2007		Implenia construction. Nant de Drance, Building ventilation, Offertunterstützung.	Implenia AG	10.0	2000
				2007		ÖMV / Tecon. Accompanying control. Design of a flue gas blower.	Austrian Petrol Company (ÖMV)		
		x		2007		Implenia Construction / GEC. Offer support. Building ventilation Ceneri Basistunnel.	Implenia AG	10.0	2000
				2007	2010	<b>ÖBB / ILF Wienerwald Tunnel, 13.4 km. PL ventilation, implementation project, tender. PL, TPL ventilation.</b>	Austrian Railways (ÖBB)	13.4	1500
x				2006		<b>Asfinag / ILF. Bosrucktunnel. 5.5 km. TPL ventilation, preliminary project, detailed project, submission, execution planning, tender.</b>	Austrian Highway Authority (Asfinag)	5.5	400
x				2006		Country South Tyrol / EUT. Optimization of control concept Tunnel St. Jakob (South Tyrol). Construction supervision, road, road traffic, 2,8 km.	Government of South Tyrol	2.8	150
	x	x		2006		<b>Implenia Bau AG / ILF CH. Ventilation and cooling calculations Offertphase Gotthard Basistunnel, railway, 55 km.</b>	Implenia AG	55.0	20000
x				2005	2011	Country South Tyrol / EUT. Tunnel Leifers (South Tyrol), road, road traffic, 2.8 km. Development planning, tendering.	Government of South Tyrol	2.8	150
	x			2005	2007	<b>BBT AG / ILF A. Brenner Basestunnel. Lot of Franzensfeste. Railway, 54 km. TPL ventilation.</b>	Brenner Base Tunnel company	54.0	20000
	x			2005	2007	<b>Zschokke Locher / ILF CH. Lötschberg tunnel. Railway, 37 km. Transition ventilation and cooling. Preliminary design, detail, execution project, commissioning, construction management and dismantling.</b>	Implenia AG	37.0	15000
	x			2004		ÖBB / ILF CH. Tender Construction project Security systems Arlbergtunnel, Eisenbahn, 10 km.	Austrian Railways (ÖBB)	10.0	100
x				2003		<b>ILF CH. Brandversuche Rennsteigtunnel, Strasse, 7.8 km. ,</b>	German Authority for Road Tunnels (BAST)	7.8	400
x				2003		<b>Asfinag / ILF CH. Preliminary project, preliminary project 2. Tube Pfändertunnel, 6.8 km.</b>	Austrian Highway Authority (Asfinag)	6.8	400
	x			2003		ÖBB / ILF CH. Preliminary project 3D CFD study on ventilation emergency exits Bingsertunnel, Austria.	Austrian Railways (ÖBB)	3.0	150
				2003	2007	<b>Zschokke Locher AG / ILF CH. Lötschberg tunnel. Railway, 37 km. Ventilation project. Deputy Project Manager</b>	Implenia AG	37.0	15000
				2003		ÖBB / ILF CH. Security concept Flughafen Wien, Fernbahnhof.	Austrian Railways (ÖBB)	4.0	200
				2003		Mott MacDonald Ltd. Cooling and ventilation of a 4000 MW cable tunnel, Singapore.	Singapore Power	1.6	10
	x			2002		Mott MacDonald Ltd. Conception of a smoke extraction system for the conversion of Euston Station, London.	Railtrack	n/a	2
	x			2002		Mott MacDonald Ltd. Development project Renovation ventilation system for the Dockland Light Railway in the tunnel near Bank Station, London	Dockland Light Railways	1.6	10

	x			2002	Mott MacDonald Ltd. Project leader lateral wind stability West Coast Mainline.	West Coast Mainline Project		n/a	1000
			x	2001	CargoLifter Development GmbH. Optimized design of tail fins of a large airship.	CargoLifter AG		n/a	
			x	2001	CargoLifter Development GmbH. Calculation of the flow around a large airship.	CargoLifter AG		n/a	
			x	2001	CargoLifter Development GmbH. Construction of a Linux cluster for technical-scientific calculations of numerical flow mechanics. Linux reference customer of IBM.	CargoLifter AG		n/a	
	x			2000	<b>Adtranz. Numerical investigation of lateral wind stability of regional vehicles. Cooperation in the TSI Committee on Sidewind Stability.</b>	ADtranz AG		n/a	
	x			2000	Adtranz. Development of the methodology of the parameterized numerical simulation of the room climate in passenger cars. Cooperation with DaimlerChrysler.	ADtranz AG		n/a	
	x			1999	Adtranz. Project Manager Advanced Technology Development Project AIRTHERM. Development and consolidation of methods and processes for the aero- and thermodynamic investigation of trains.	ADtranz AG		n/a	
	x			1998	<b>Adtranz. Aerodynamic examination of the ICE 3 and the Transrapid.</b>	ADtranz AG		n/a	
	x	x		1998	<b>Dissertation, Ecole Polytechnique Fédérale de Lausanne (EPFL). "Simulation of compressible flow in a tunnel system induced by trains traveling at high speed".</b>	EPFL		n/a	
	x	x		1996	<b>Diploma thesis, Ecole Centrale de Lyon (ECL), Ecole Polytechnique Fédérale de Lausanne (EPFL). "Comparison of systems for active and passive flow bypassing".</b>	EPFL		n/a	
			x	1993	Diploma thesis, University (TH) Karlsruhe / University of Massachusetts at Amherst, USA. "Design of Components for a Central Solar Heating Plant with Seasonal Storage (CSHPSS)".	KIT		n/a	
			x	1991	Study work, University of Karlsruhe. "From an idea to the modern science discipline of bionics. A contribution to history, science theory and content".	KIT		n/a	